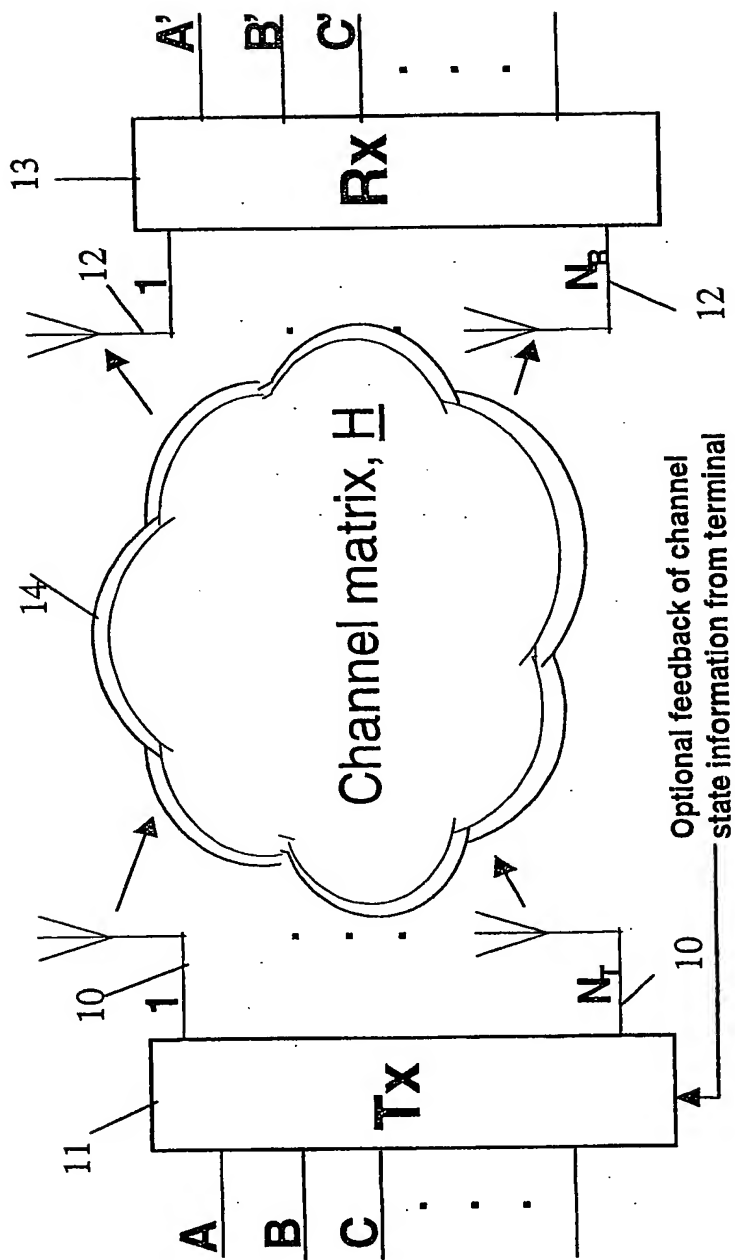


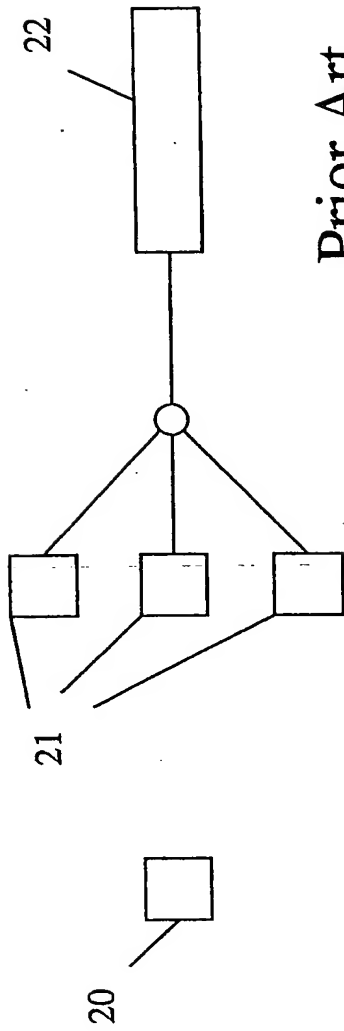
1/20 15



PRIOR ART

FIGURE 1

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Prior Art

Figure 2a

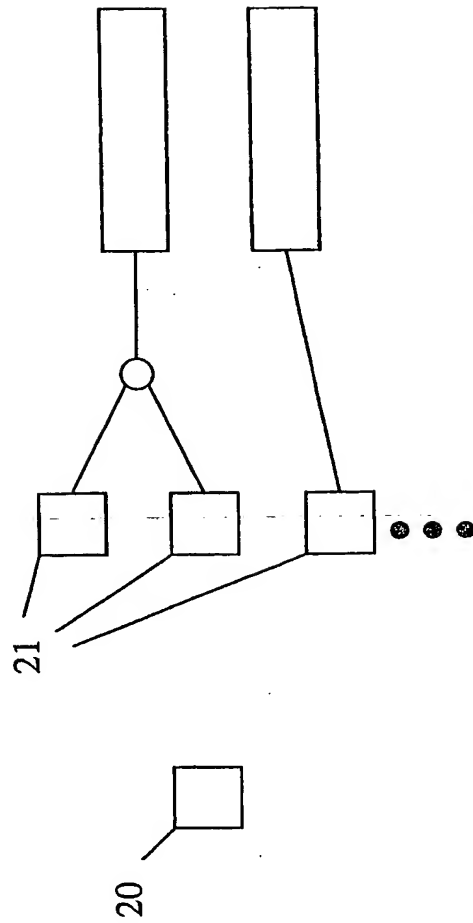
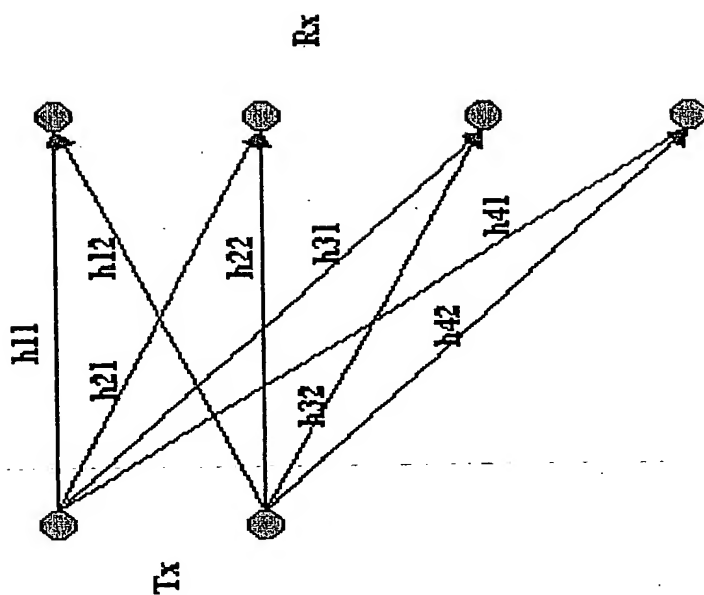


Figure 2b



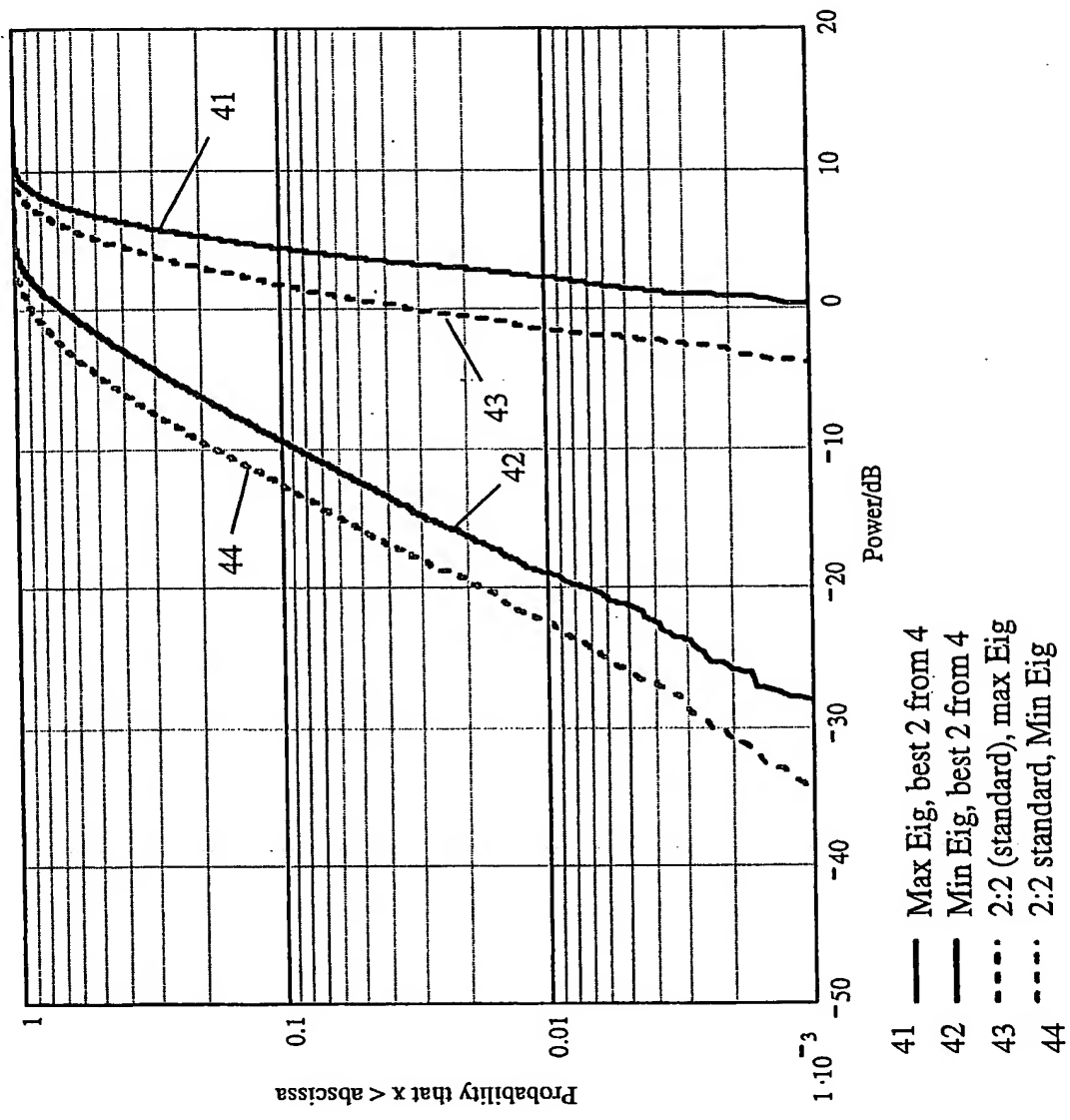
3/20 15



MIMO configuration with 2 Node B antennas and 4 UE antennas

Figure 3

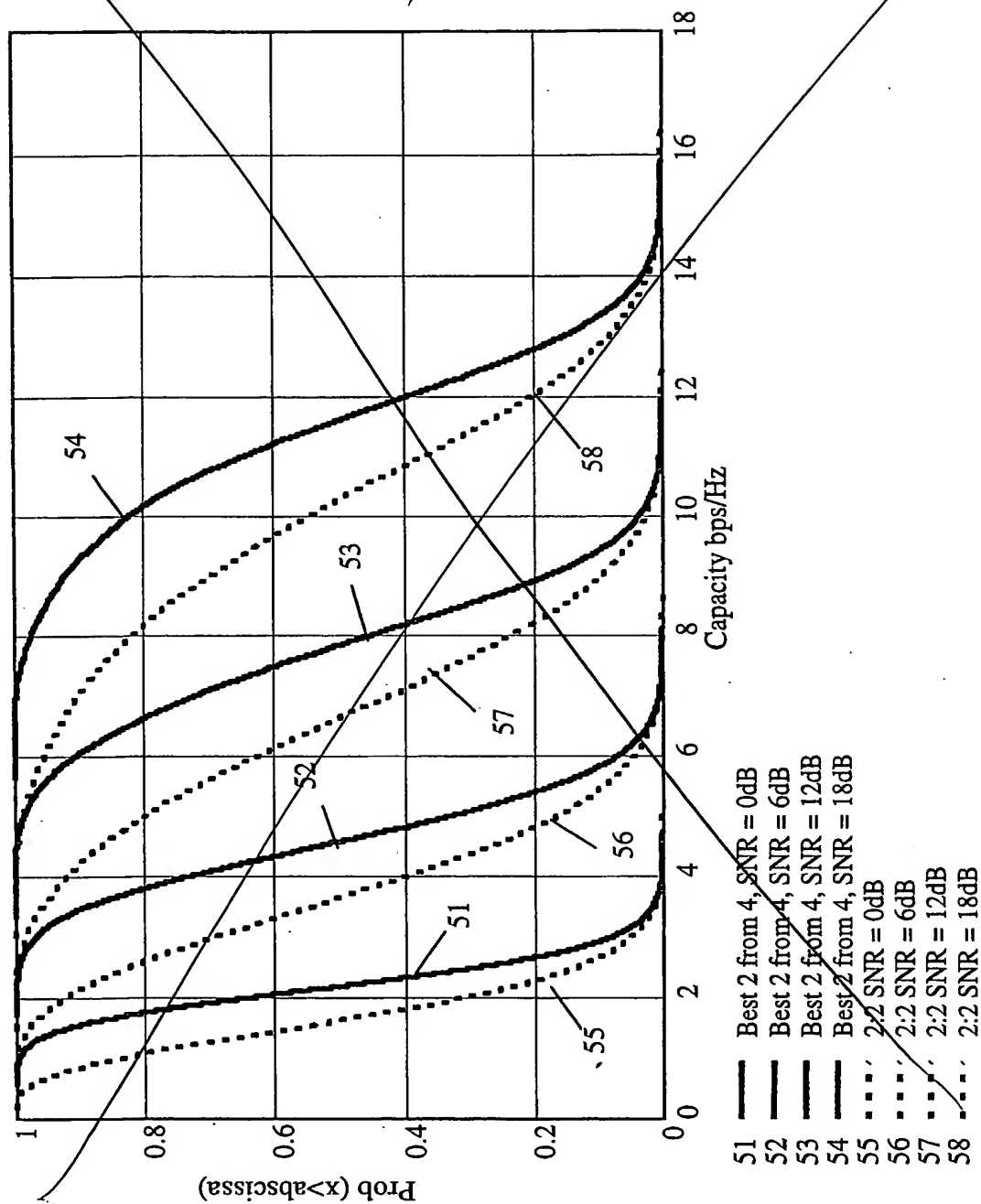
4/20 15



Comparison of eigenvalues for standard 2:2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum sum of eigenvalues as the selection metric.

Figure 4

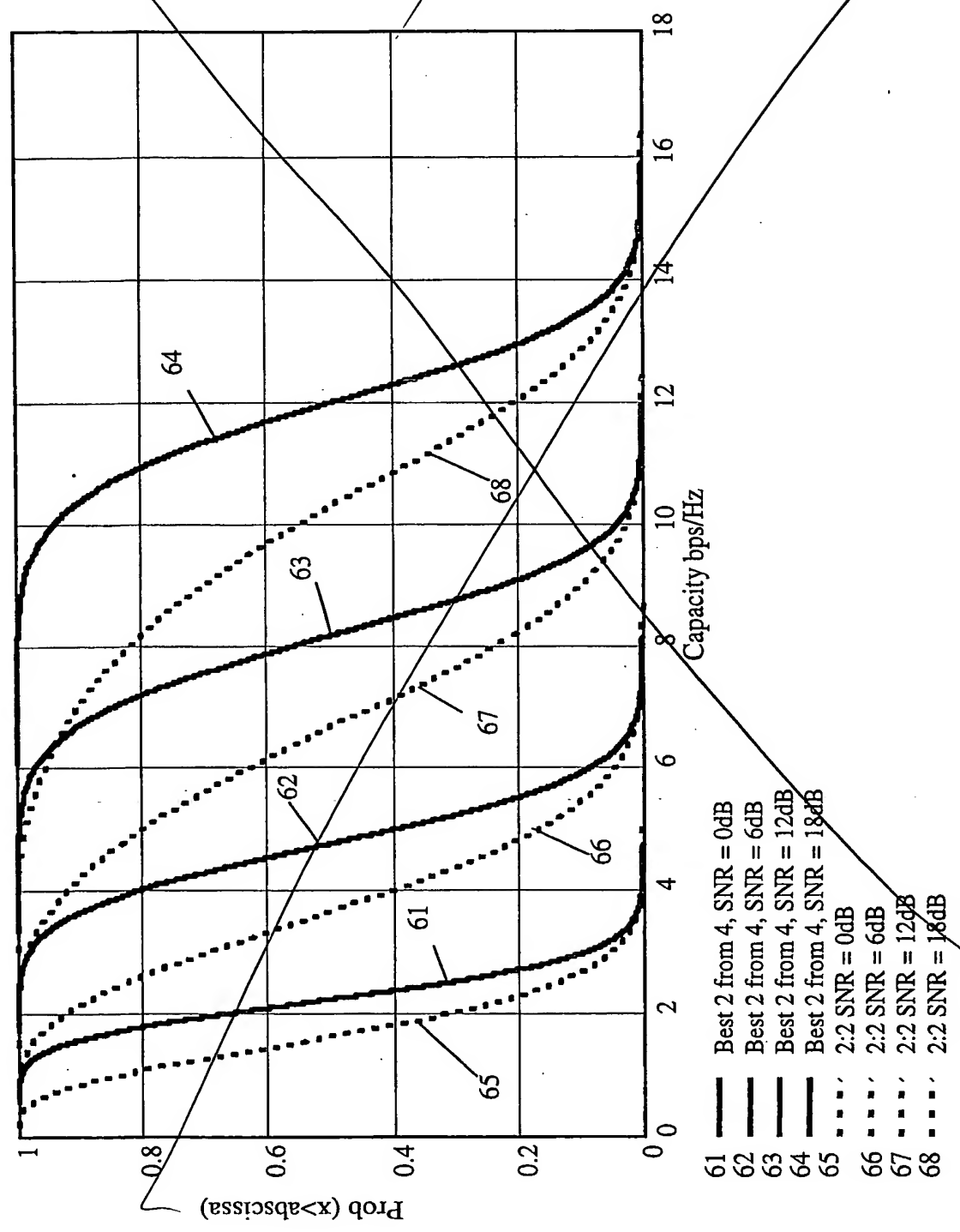
5/20



Comparison of capacity distributions for standard 2:2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum sum of eigenvalues as the selection metric.

Figure 5

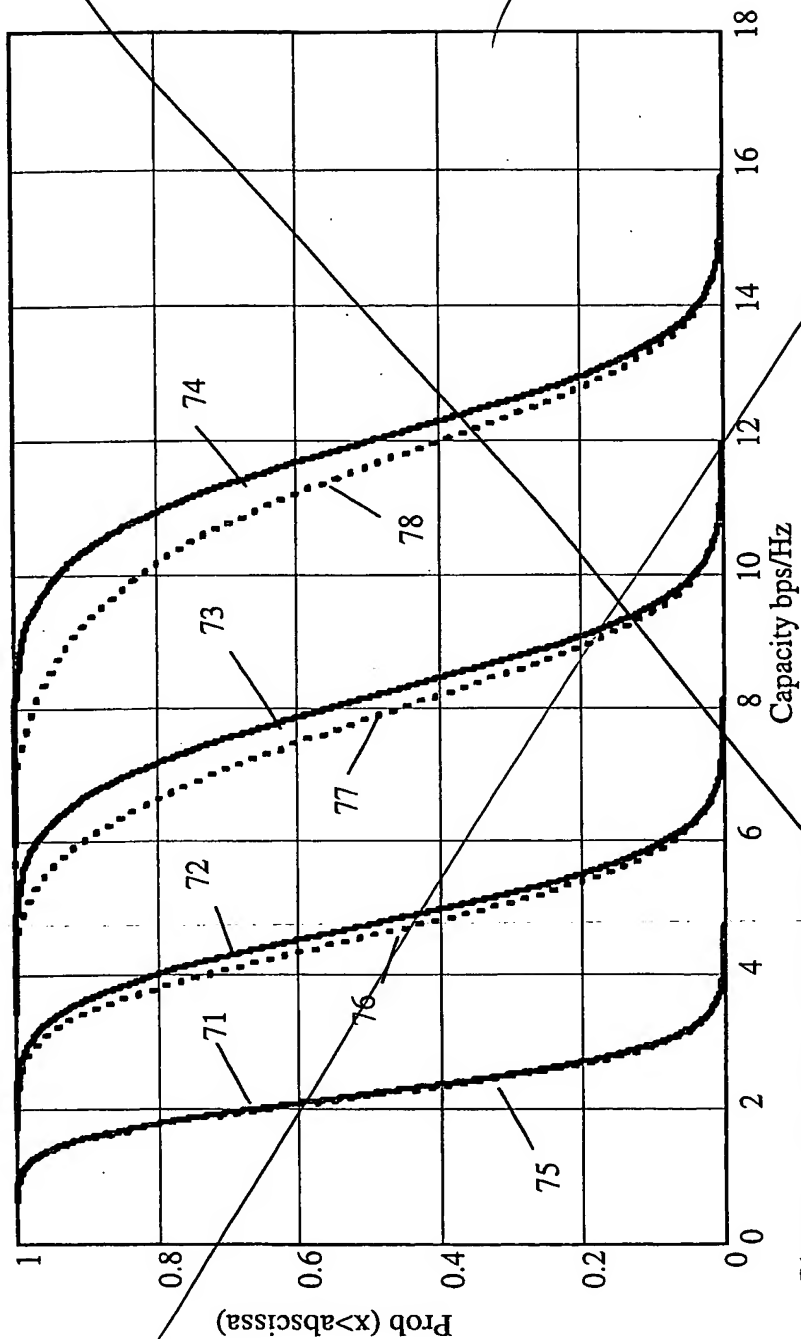
6/20



Comparison of capacity distributions for standard 2:2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum instantaneous link capacity as the selection metric.

Figure 6

7/20

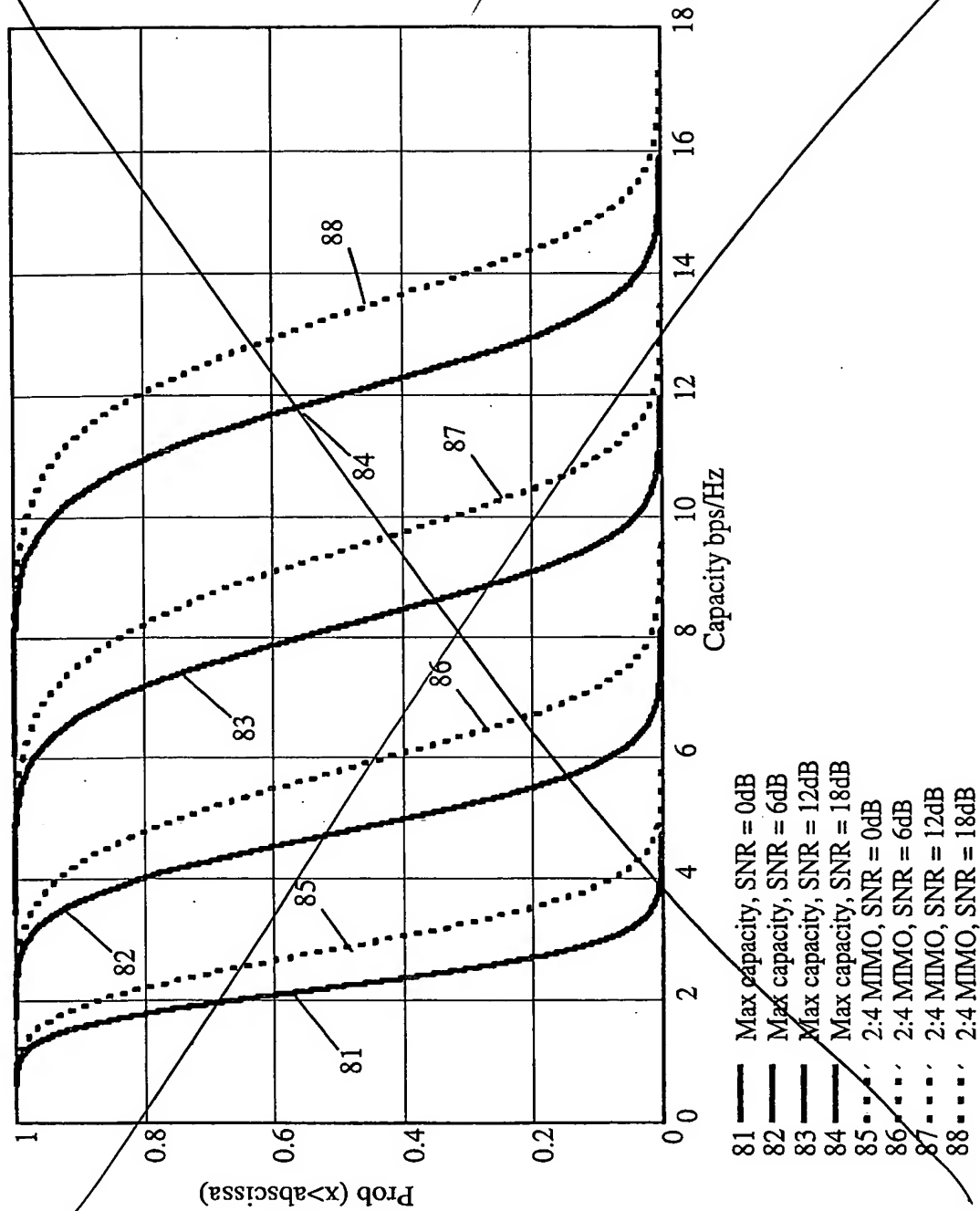


- 71 ——— Max capacity, SNR = 0dB
- 72 ——— Max capacity, SNR = 6dB
- 73 ——— Max capacity, SNR = 12dB
- 74 ——— Max capacity, SNR = 18dB
- 75 Max sum of eigenvalues, SNR = 0dB
- 76 Max sum of eigenvalues, SNR = 6dB
- 77 Max sum of eigenvalues, SNR = 12dB
- 78 Max sum of eigenvalues, SNR = 18dB

Comparison of capacity distributions for the two eigenvalue selection diversity schemes

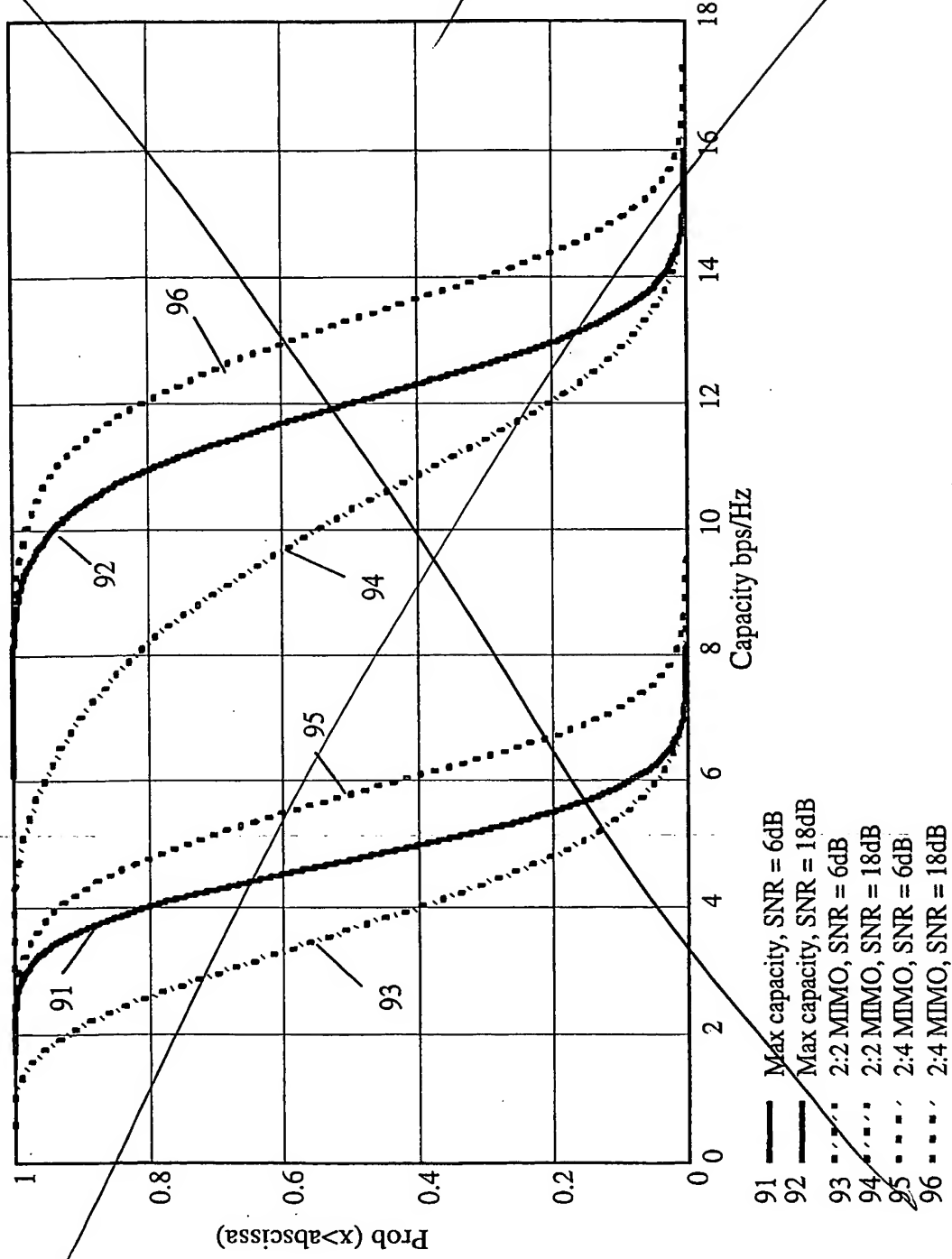
Figure 7

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Comparison of 'maximum capacity' eigenvalue selection diversity and standard 2:4 MIMO capacity distributions.

Figure 8



Comparison of maximum capacity eigenvalue selection diversity with 2:2 and 2:4 MIMO capacity curves

Figure 9

5 10/20 15

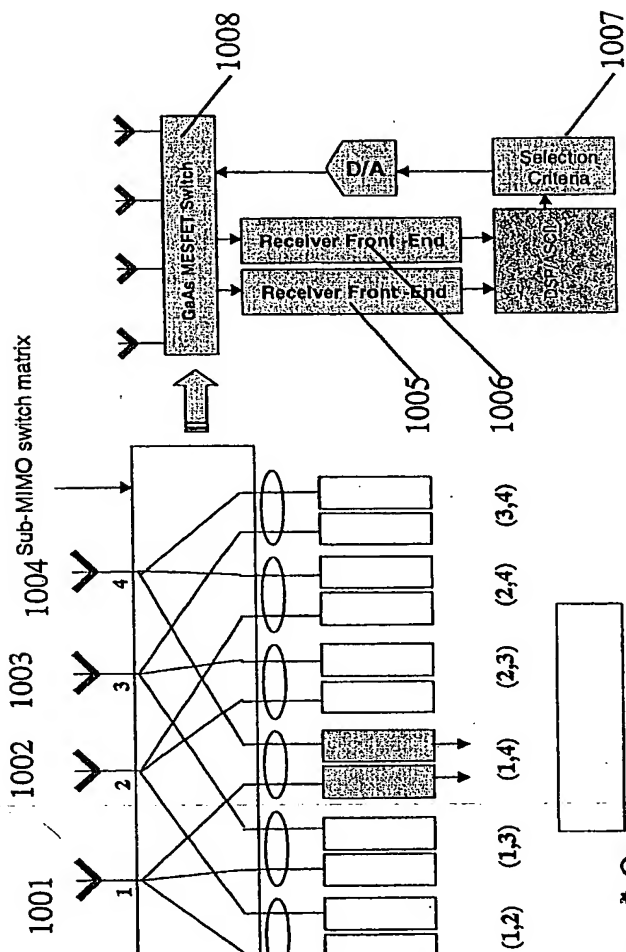


Figure 100a

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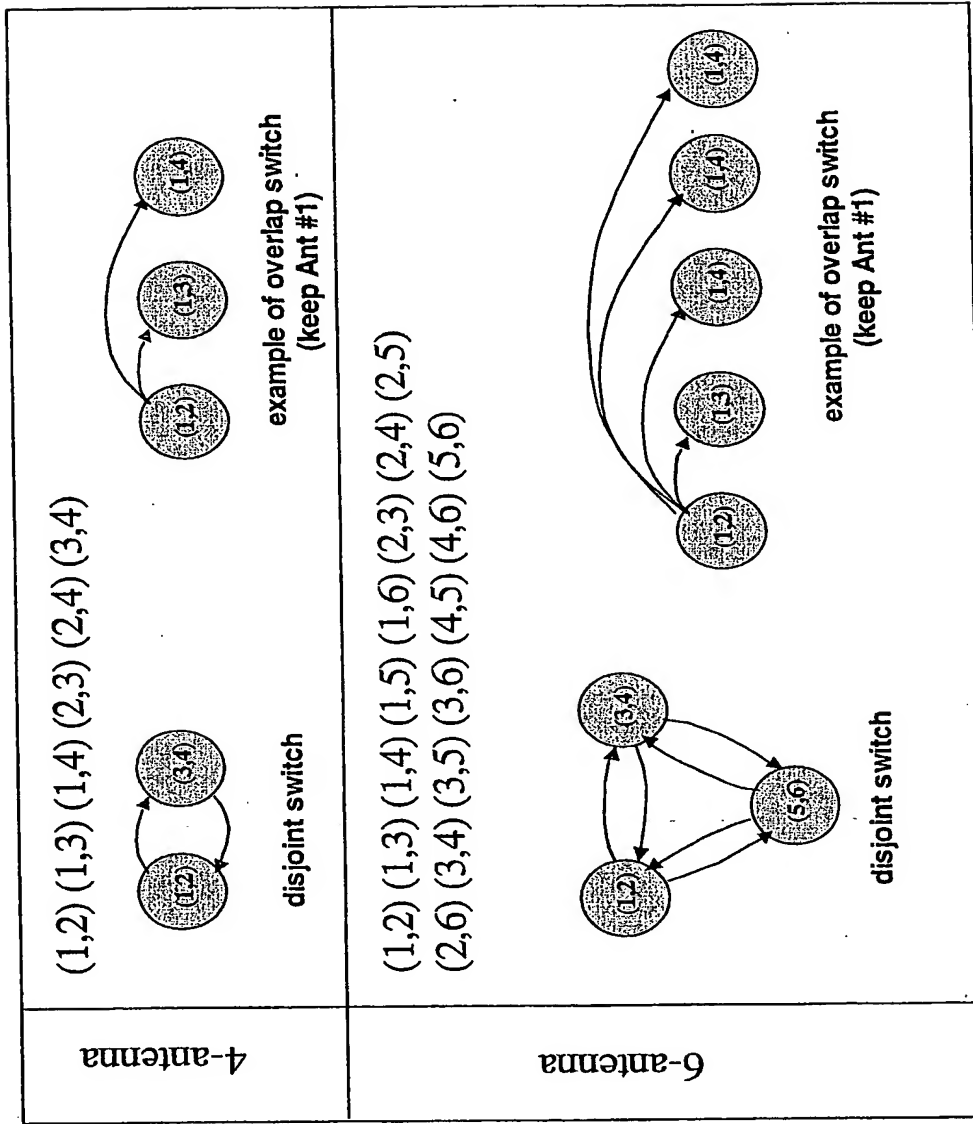


Figure 10b 6

7 12/20 15

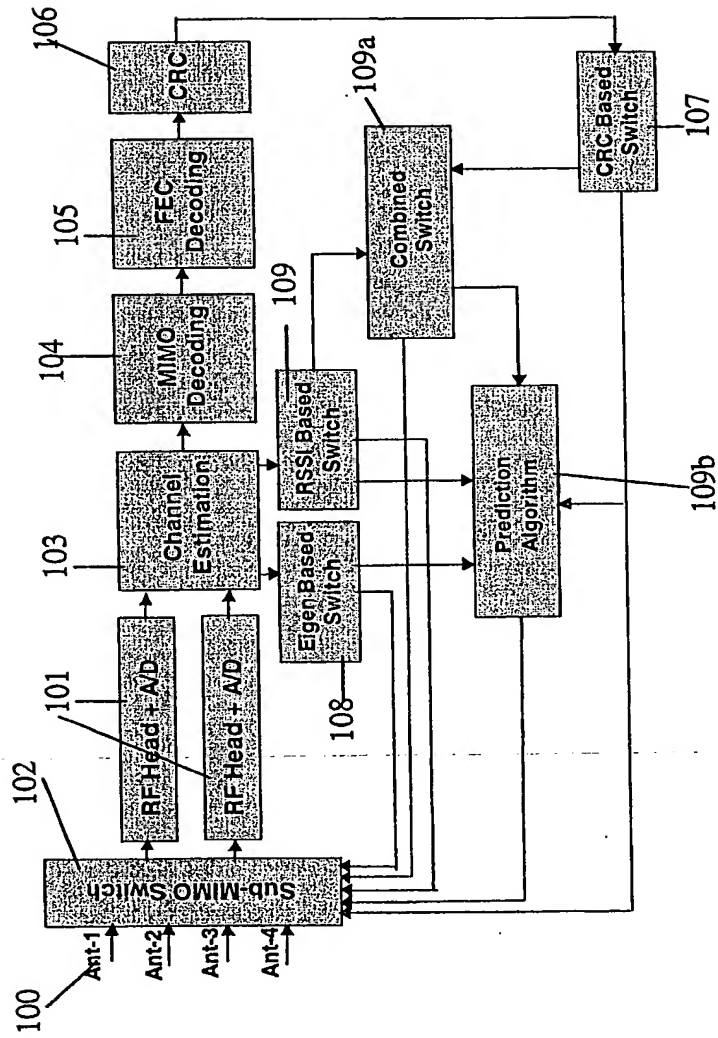


Figure 10c 7



8/13/2015

Sub-MIMO Switching Comparison

(STTD, ITU-VA, 100km/h, QPSK, R=1/3)

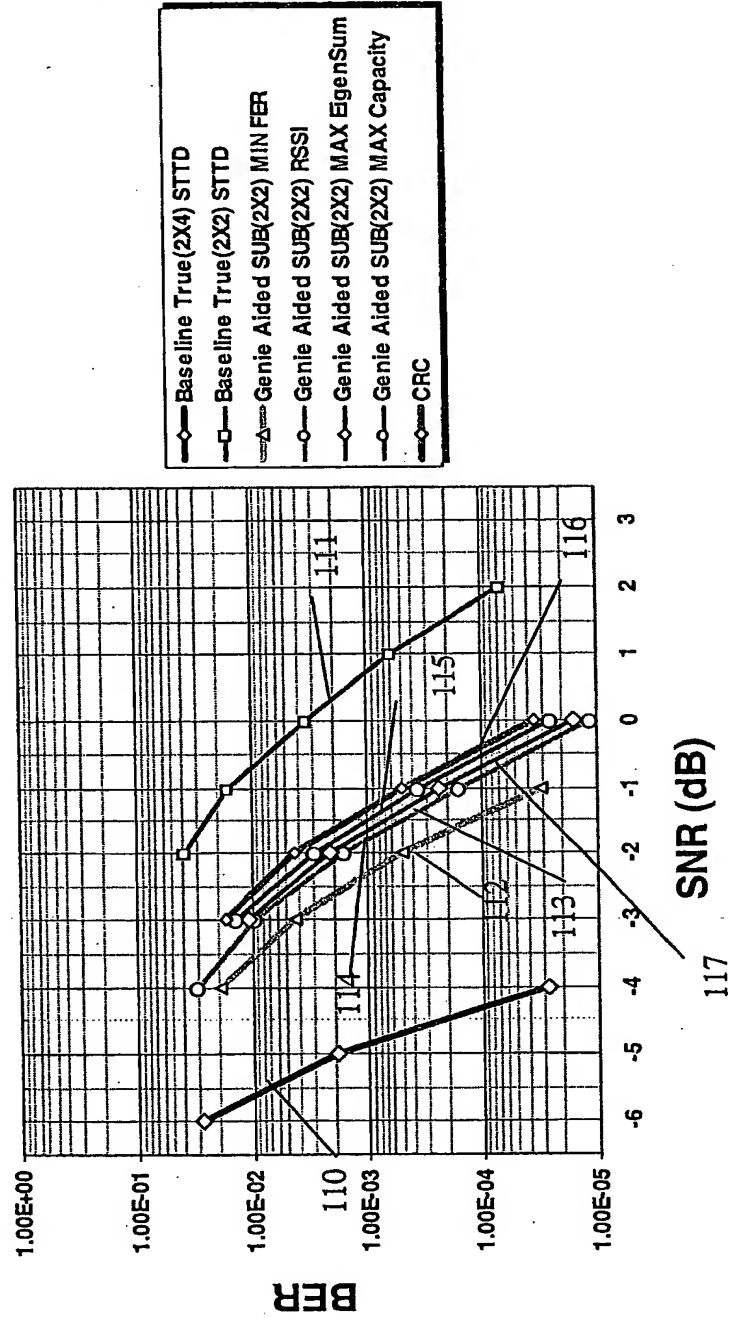


Figure 18



9 14/20 15

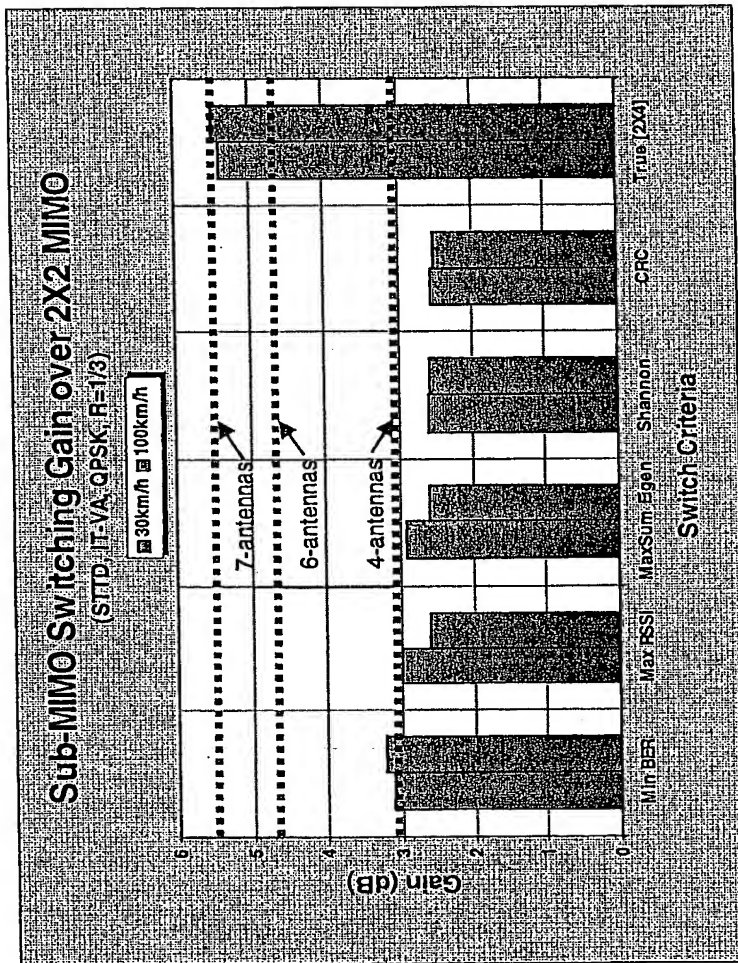


Figure 12.9



10 15/20 15

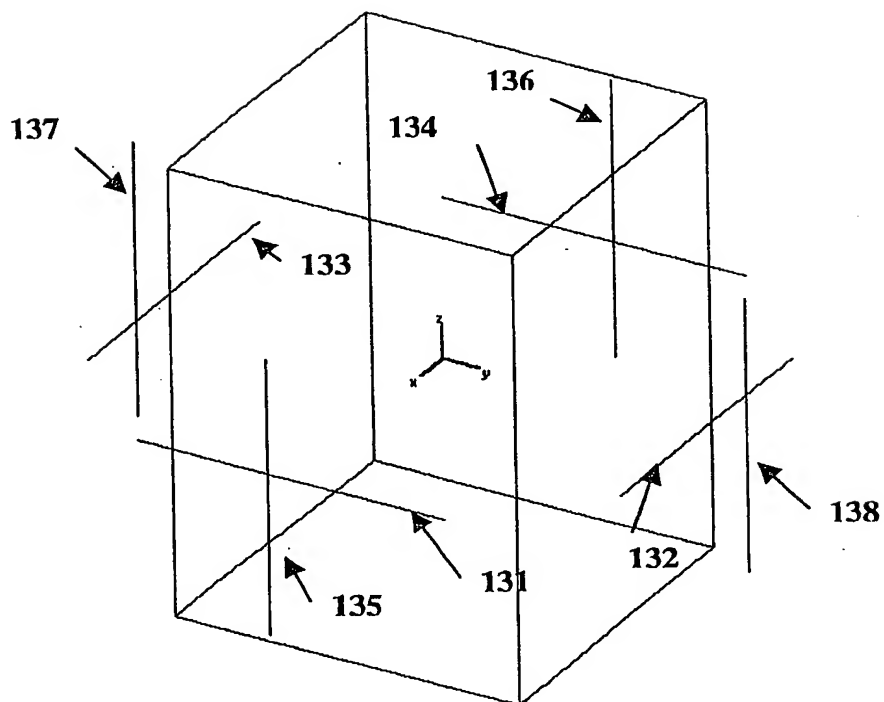


Figure ~~13~~ 10



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16/20

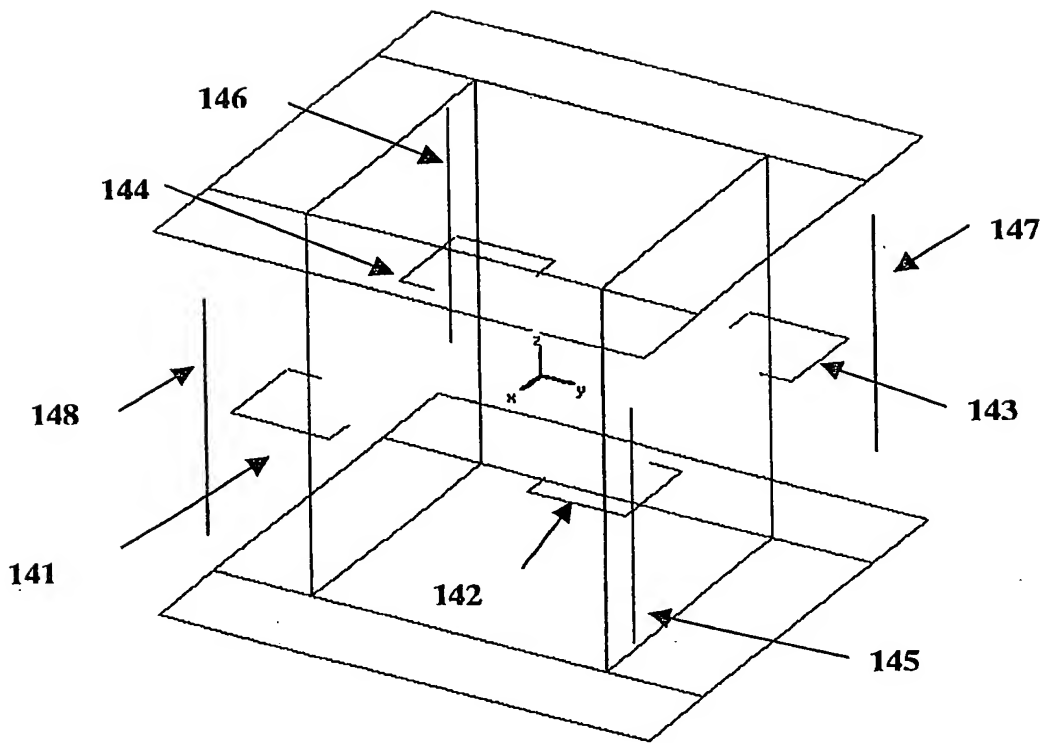


Figure ~~14~~ 11



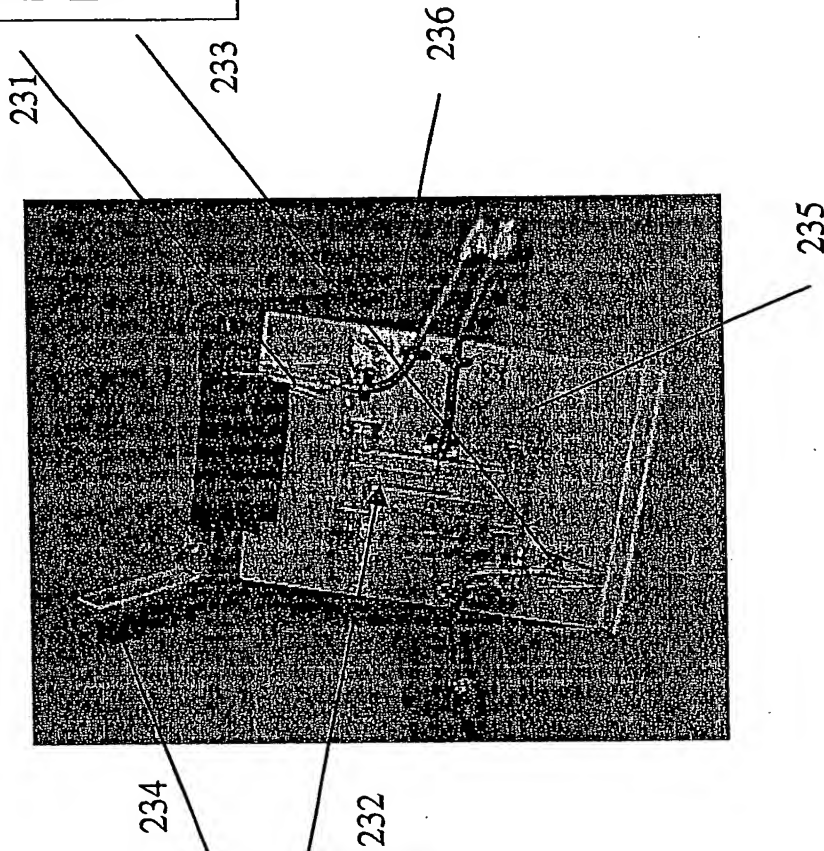
1217/2015

	Configuration 1		Configuration 2			
	180°	4.6	180°	3.9		
Average signal level (dB)	90°	6.7	90°	4.8		
Signal level spread (dB)	180°	1.4	180°	1.5		
Average standard deviation (dB)	90°	0.5	90°	0.3		
	180°	4.1	180°	1.7		
	90°	1.4	90°	0.4		
Lowest maximum achievable diversity gain (dB) (unit 0° orientation)	11.5		15			
Lowest maximum achievable diversity gain (dB) (unit 45° orientation)	14.5		14			

Figure 15.17

1318/2015

Elements 231 &
233 – umbrella
monopoles
polarised at
nominally +45°.



Element 232 –
folded slot & 234 –
monopole, which are
nominally polarised
to -45°.

FIGURE 16



14 ~~19/20~~ 15

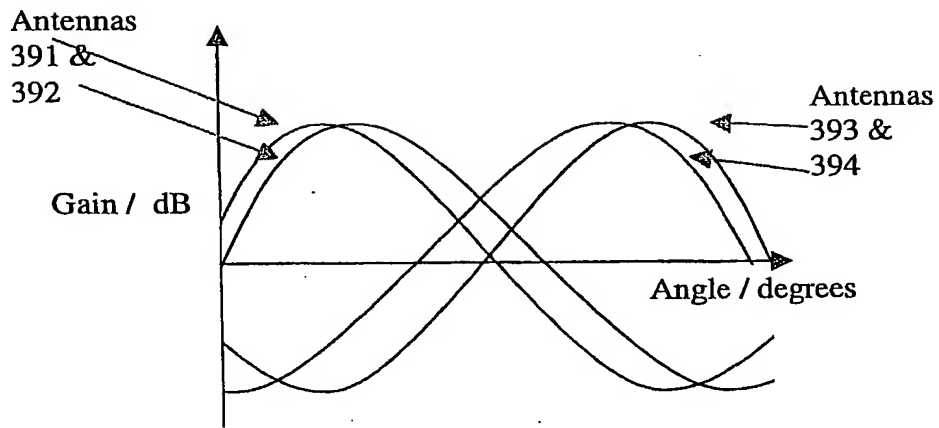


Figure ~~14~~ 14



15 20/20 15

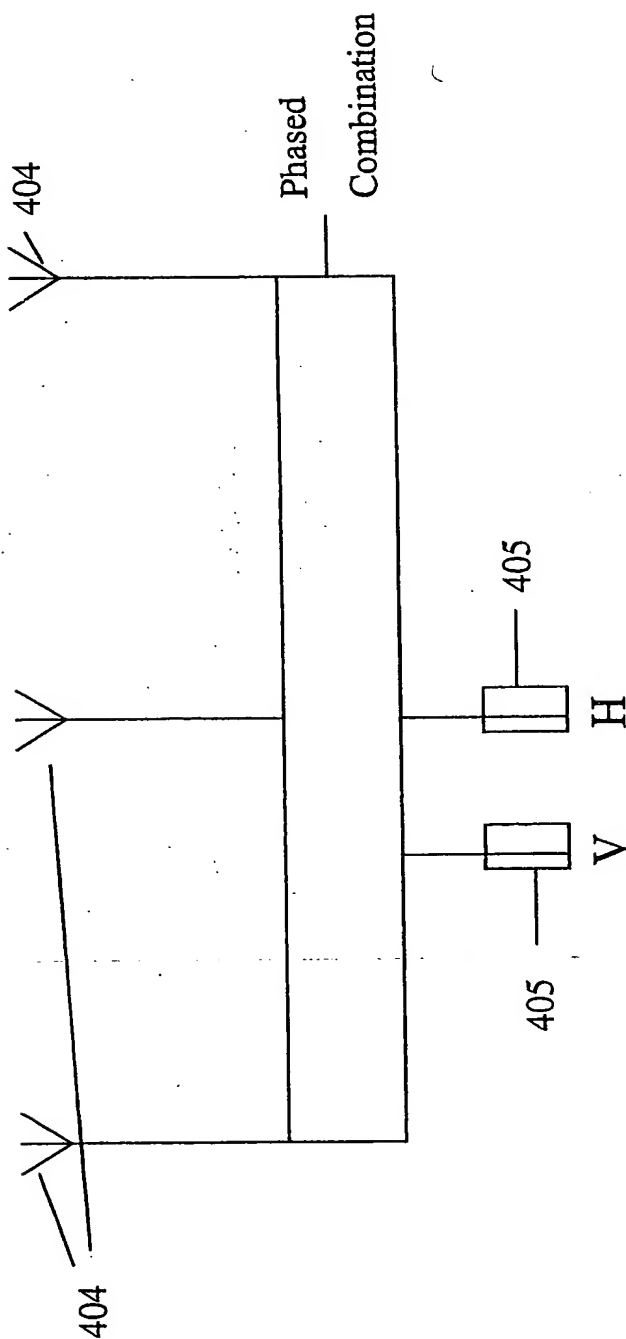
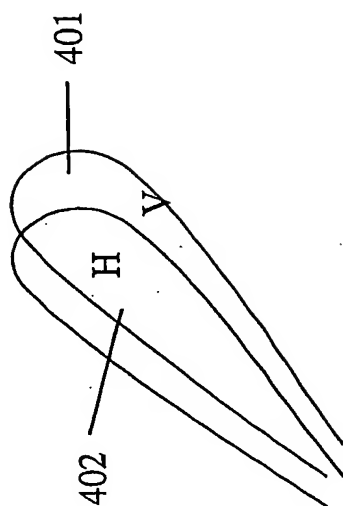
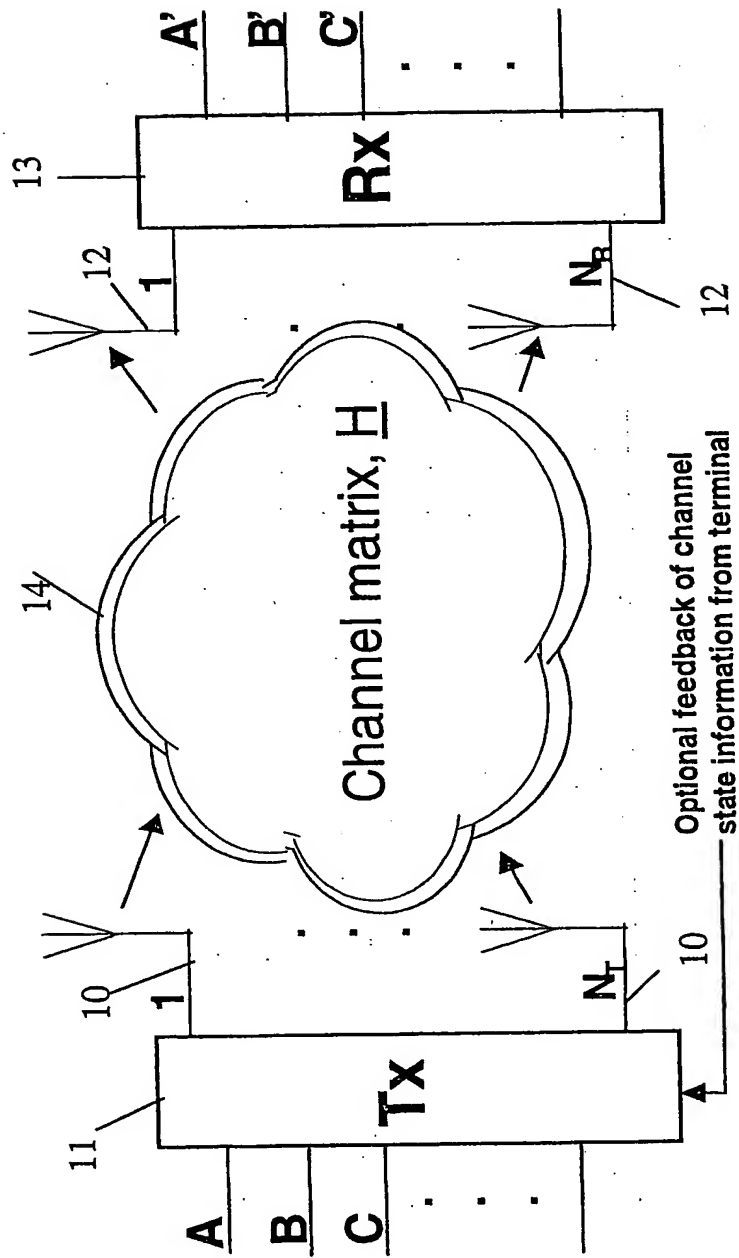


FIGURE 18 15

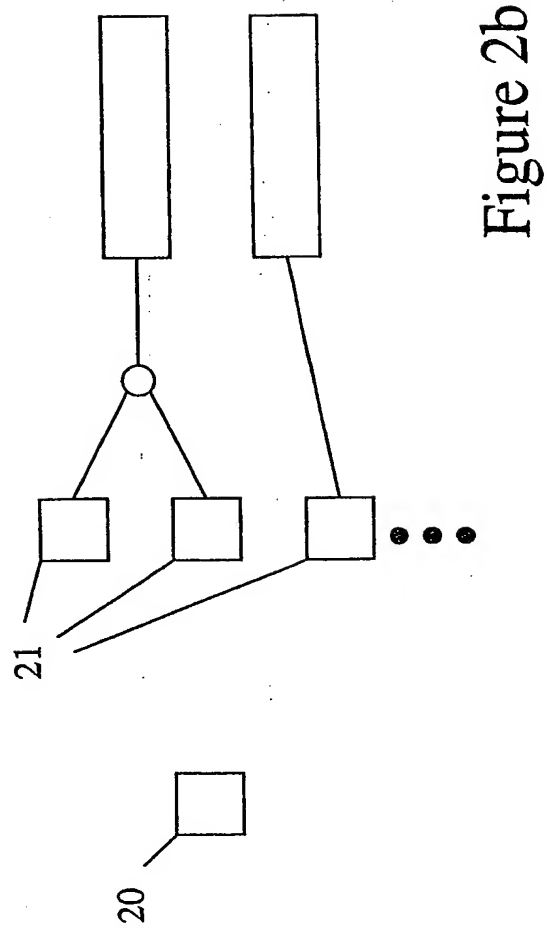
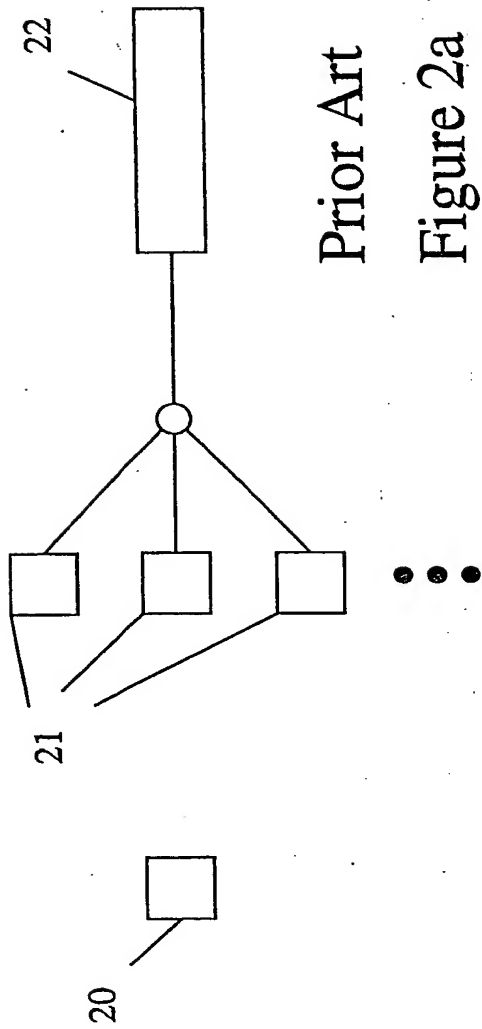
1/20 15



PRIOR ART

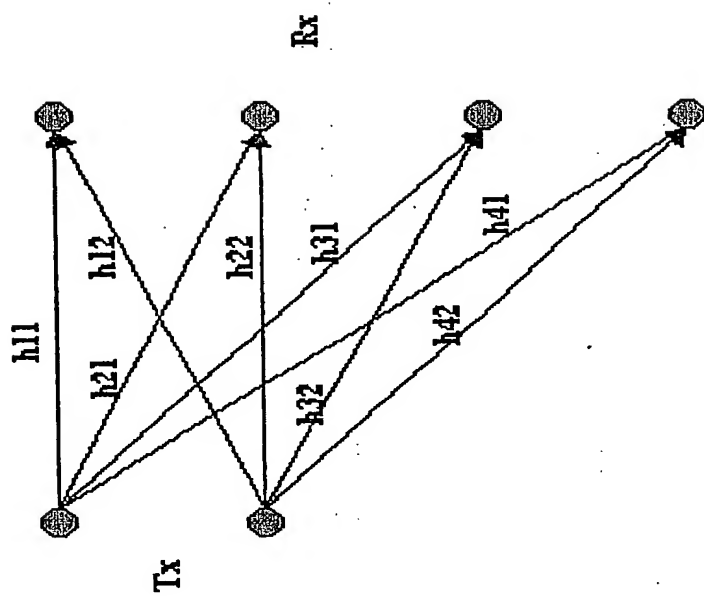
FIGURE 1

2/20 15





3/20 15

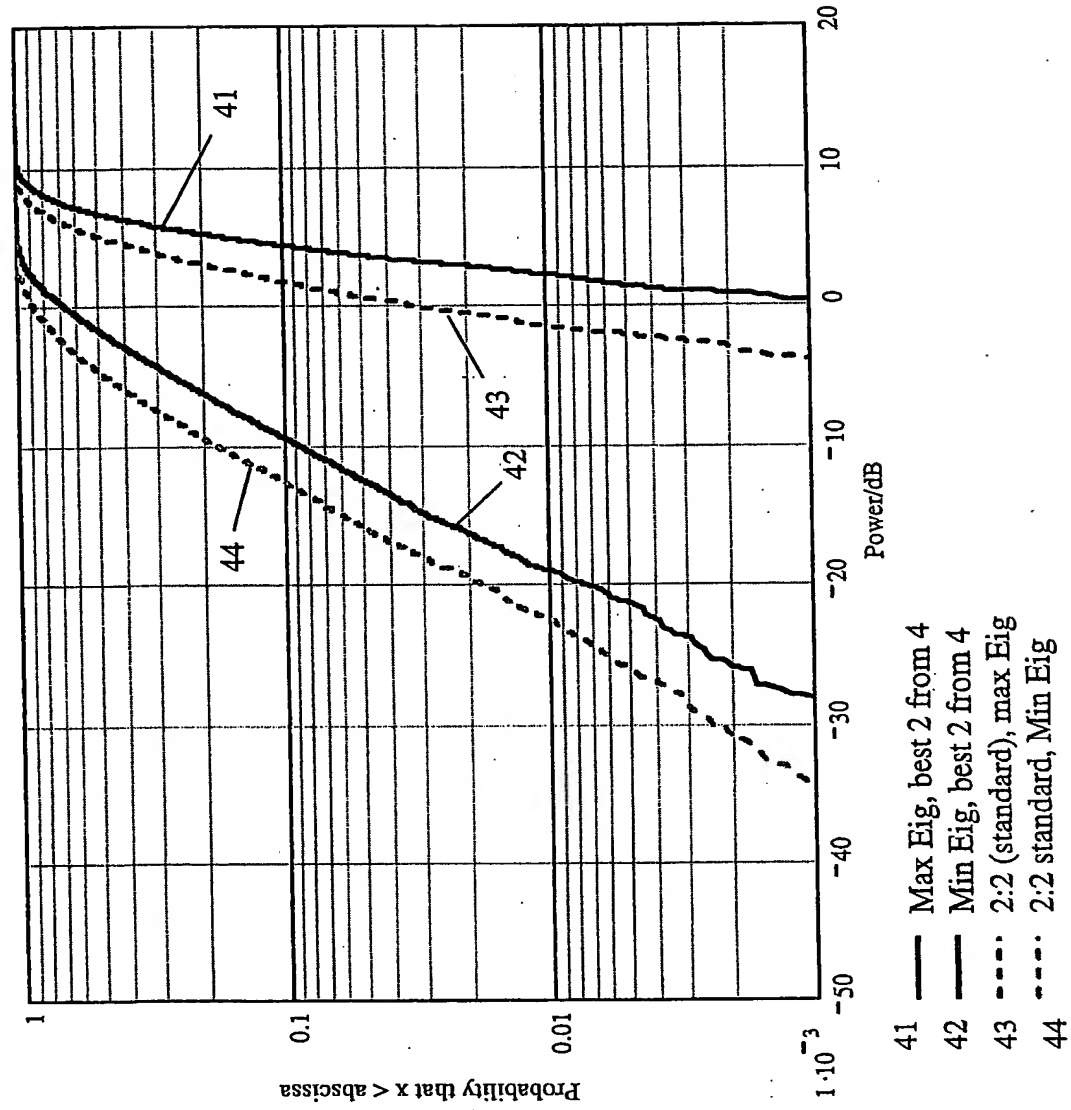


MIMO configuration with 2 Node B antennas and 4 UE antennas

Figure 3



4/20 15



Comparison of eigenvalues for standard 2:2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum sum of eigenvalues as the selection metric.

Figure 4

5 10/20 15

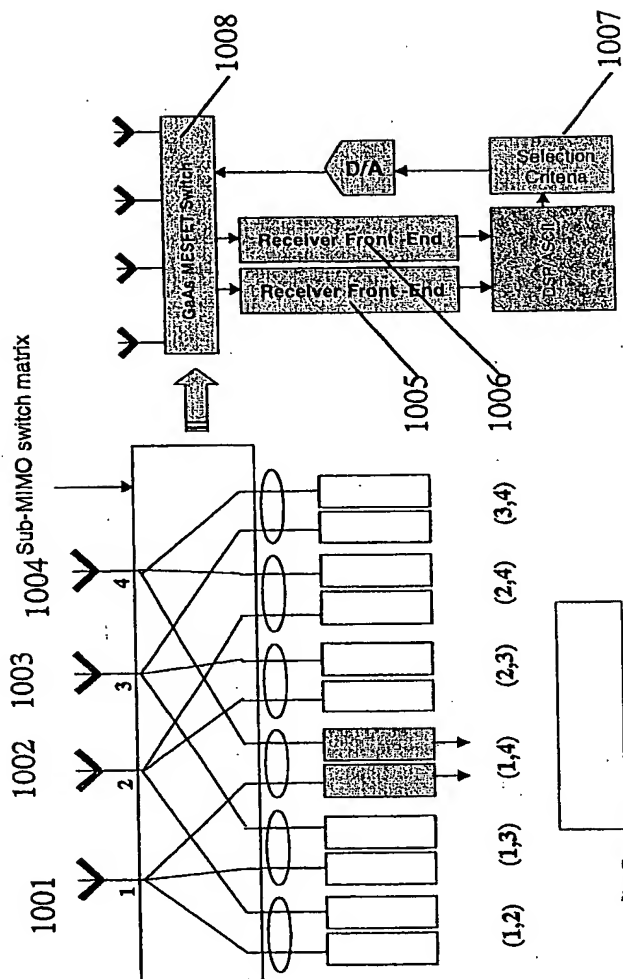


Figure 1004

6/11/2015

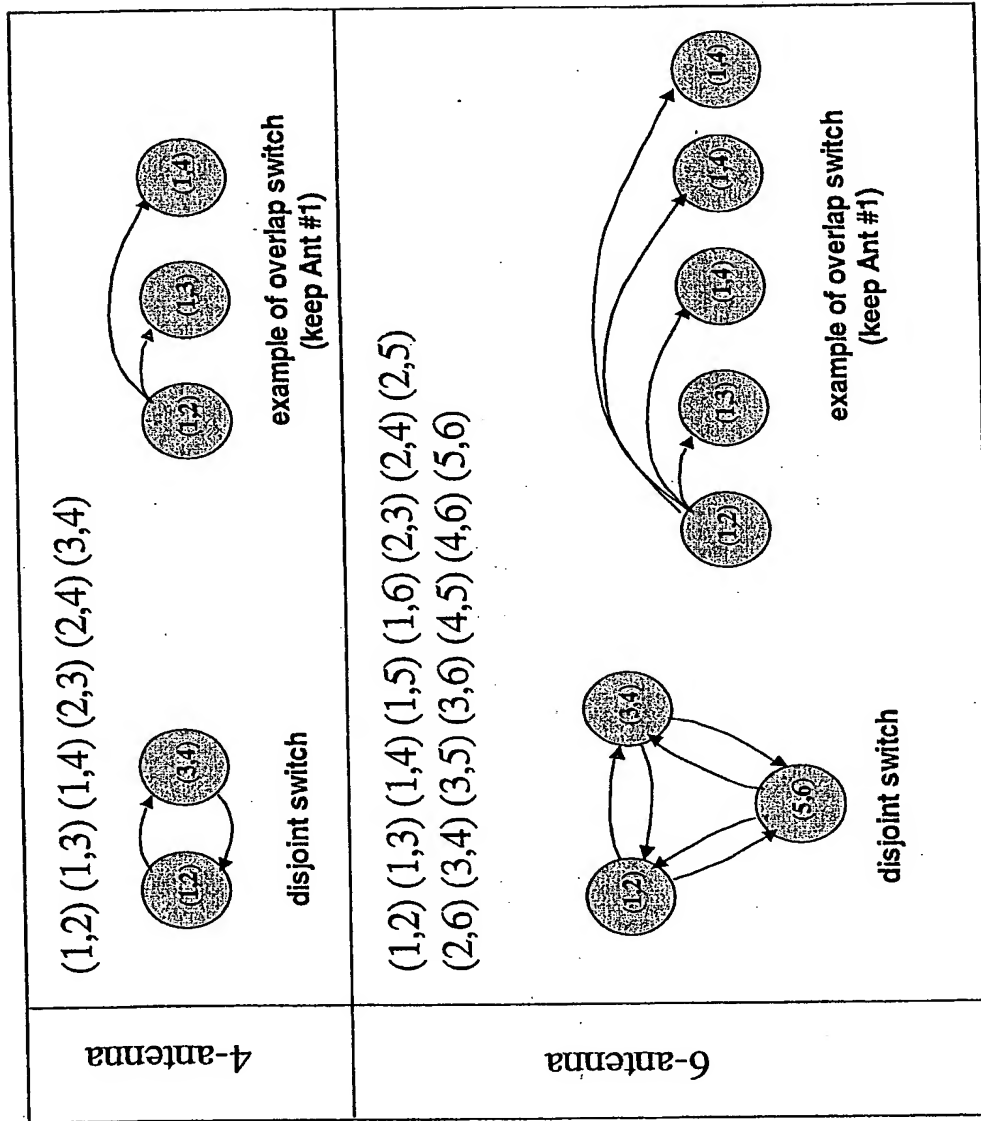


Figure 106 6

7 ~~12/20~~ 15

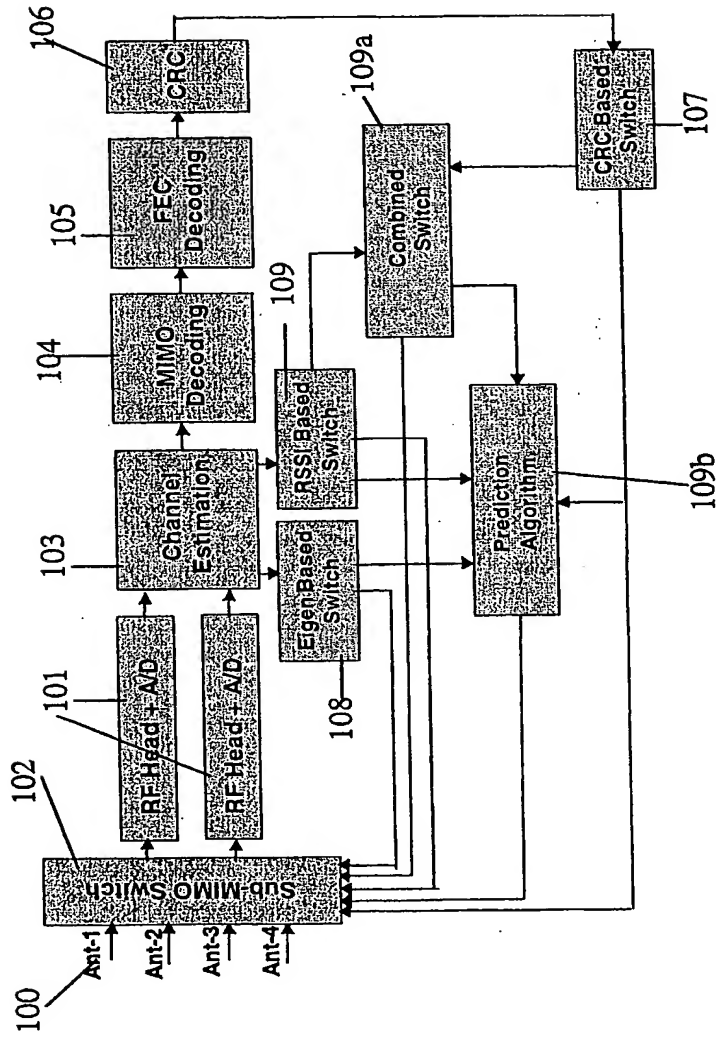


Figure 10c 7

8/13/20 15

Sub-MIMO Switching Comparison

(STTD, ITU-VA, 100km/h, QPSK, R=1/3)

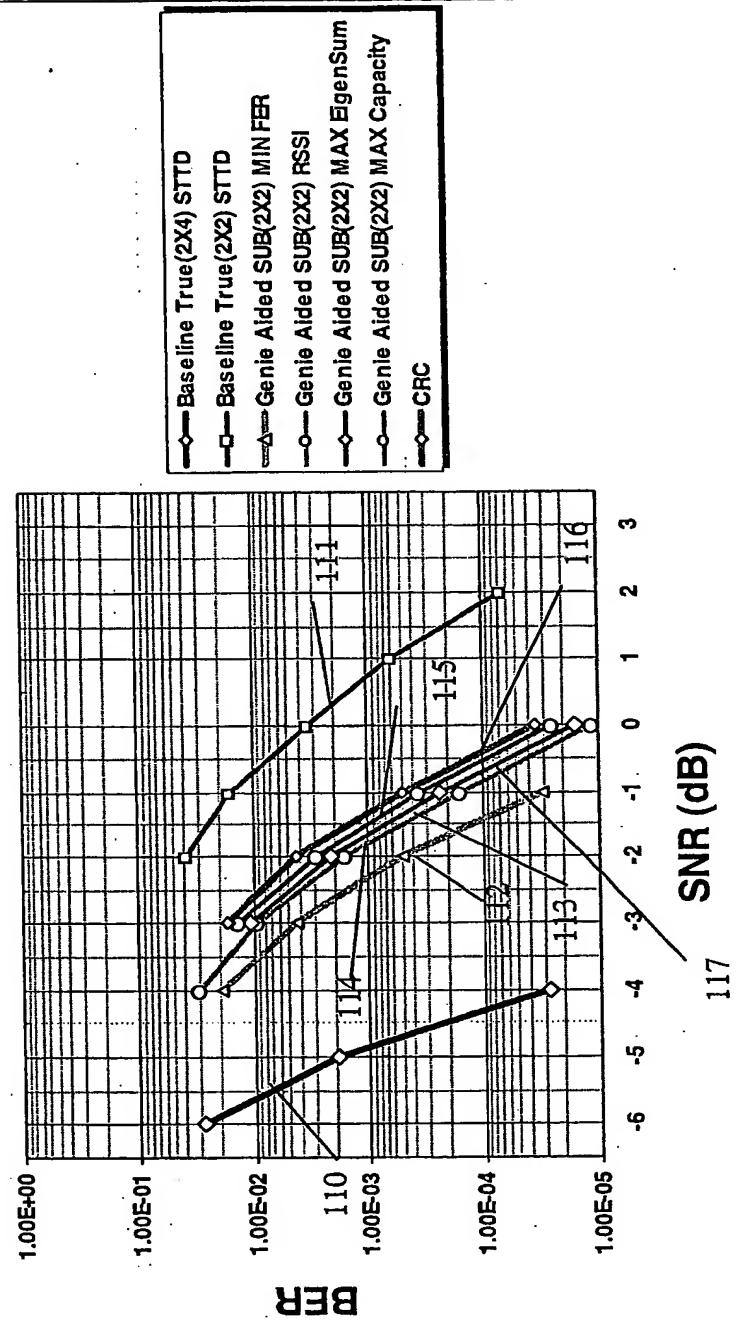


Figure X8



9 14/20 15

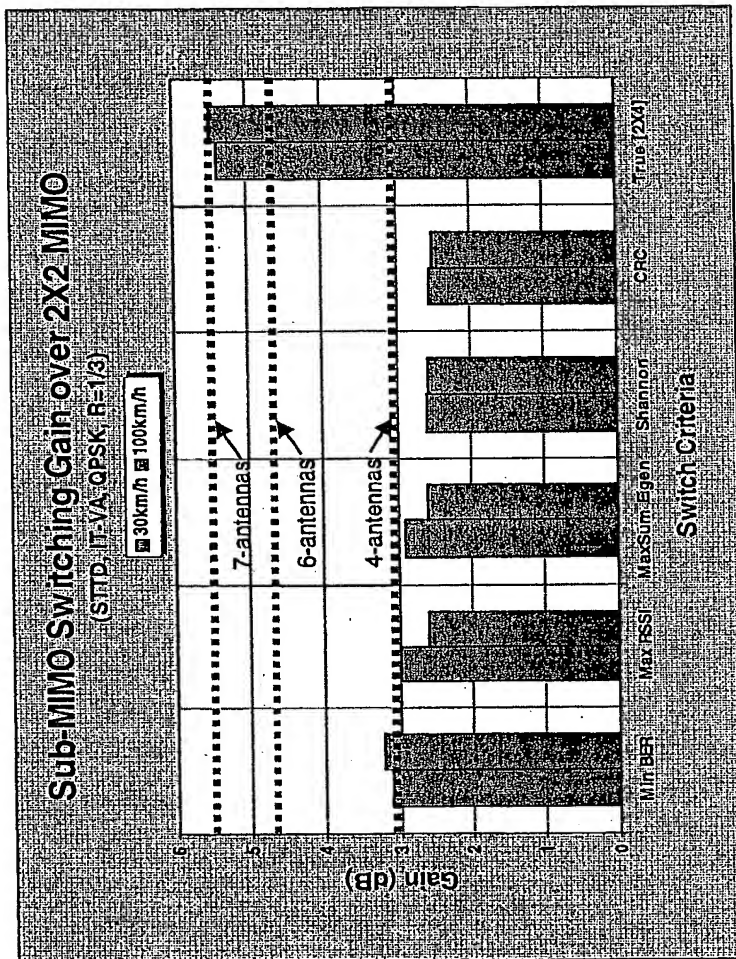


Figure 18.9



10 ~~15/20~~ 15

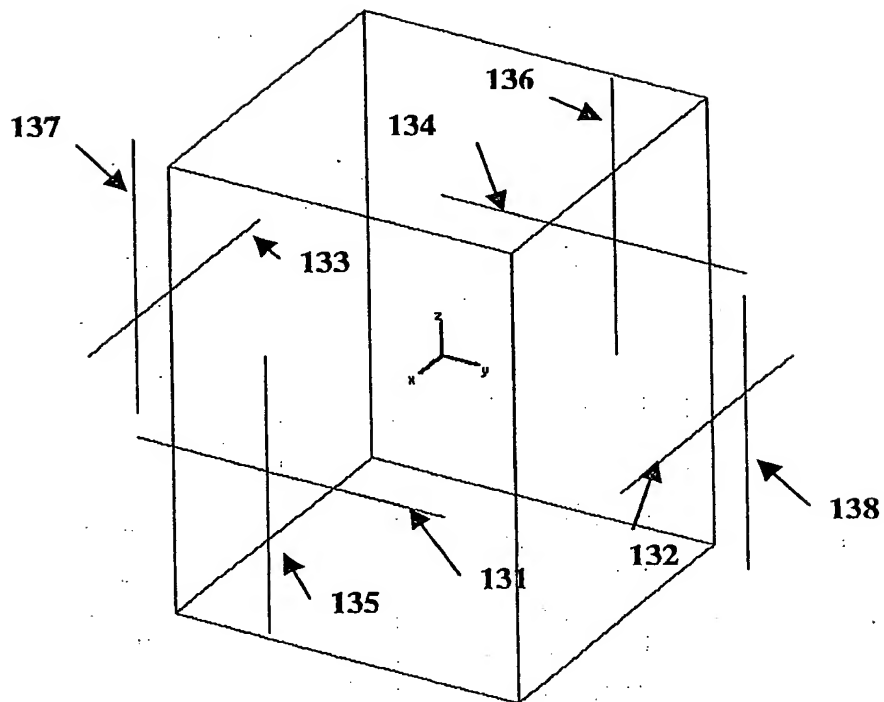
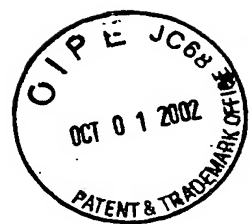


Figure ~~15~~ 10



11/15
~~16/20~~

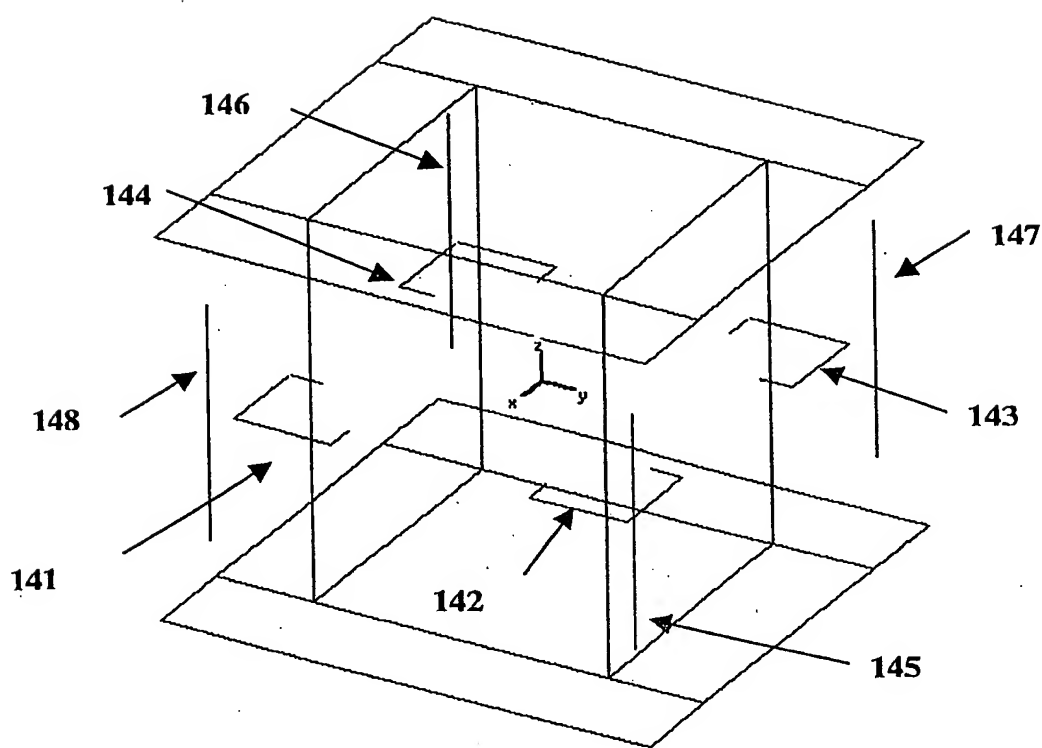


Figure ~~A~~ 11



12/17/2015

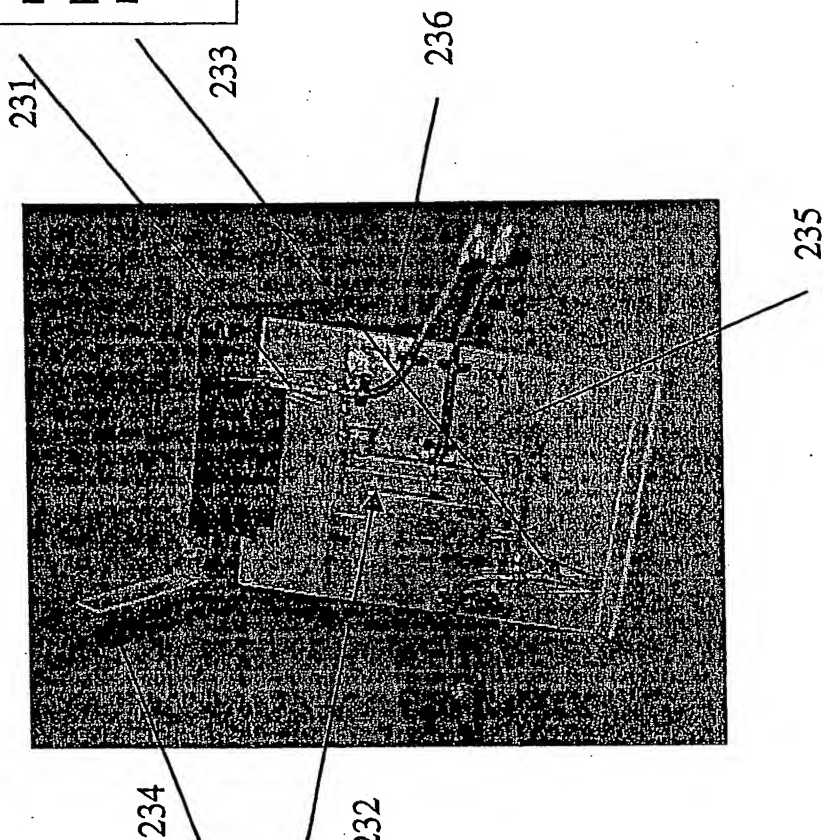
	Configuration 1		Configuration 2		
Average signal level (dB)	180°	4.6	180°	3.9	
	90°	6.7	90°	4.8	
Signal level spread (dB)	180°	1.4	180°	1.5	
	90°	0.5	90°	0.3	
Average standard deviation (dB)	180°	4.1	180°	1.7	
	90°	1.4	90°	0.4	
Lowest maximum achievable diversity gain (dB) (unit 0° orientation)	11.5		15		
Lowest maximum achievable diversity gain (dB) (unit 45° orientation)	14.5		14		

Figure 15 17



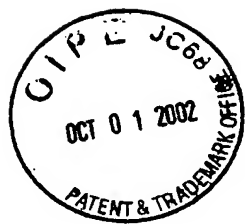
13/18/2015

Elements 231 &
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Element 232 –
folded slot & 234 –
monopole, which are
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FIGURE 13



14 ~~19/20~~ 15

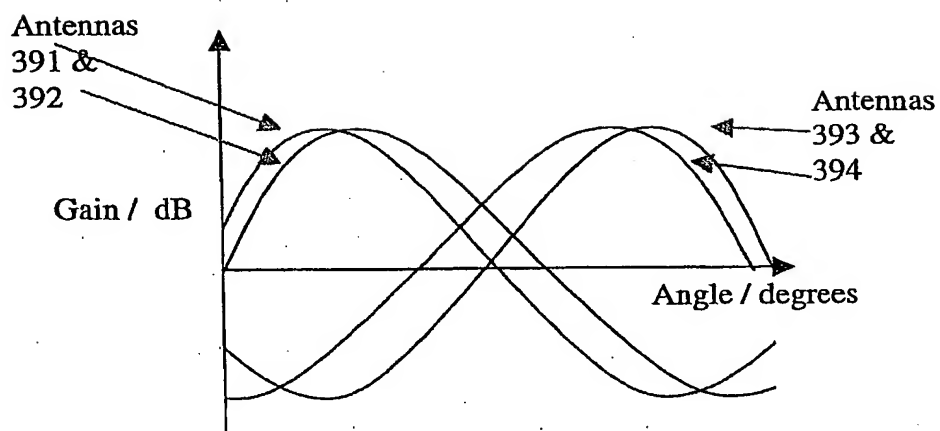


Figure ~~13~~ 14



15 20/20 15

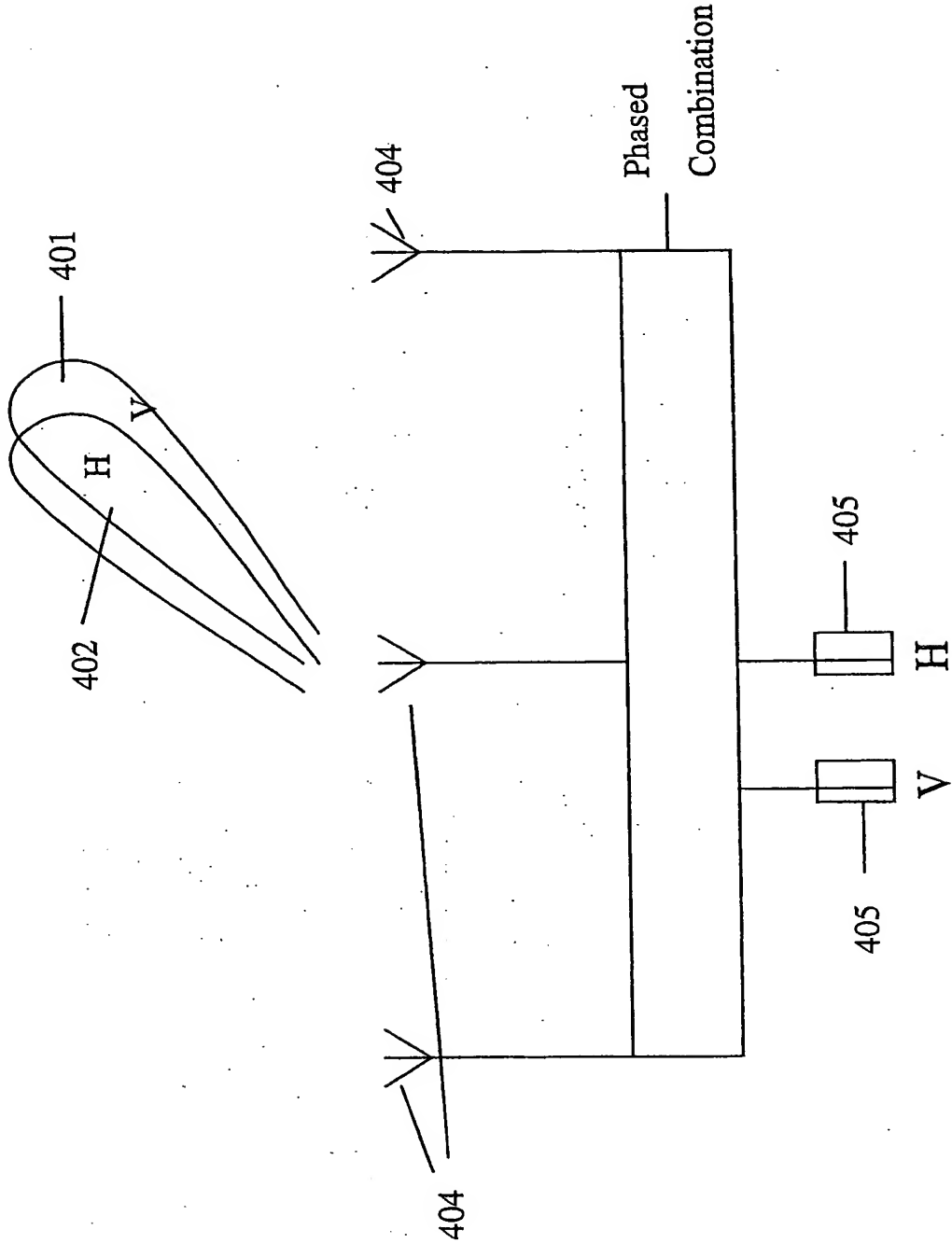


FIGURE 28 15